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ABSTRACT

This chapter presents the history, philosophy, and curriculum of the IDD (Instructional Design and Development) program at Florida State University. The origins of the program are described, the primary factors that influenced the program as it now exists are detailed, and the major competency areas of the program are examined. The current master's and doctoral programs are then described in terms of their academic content, procedures, and faculty roles. The chapter concludes with discussions of the distinguishing characteristics of the program and projected future developments. (Author/EW)

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Chapter 43

Training Instructional Designers at Florida State University

Walter Dick
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"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
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Florida State University has a reputation for having an instructional development program with an extremely strong educational psychology orientation. This chapter documents the growth of the ID program at Florida State, reports on current FSU curriculum content, and projects the future of the program.

The preparation of instructional designers* is a relatively new responsibility of higher education. Many of the faculty members who are teaching in such programs have received no formal training in instructional design, but rather have been trained in such related disciplines as psychology, educational psychology and communications. At this time, there is beginning to emerge a consensus concerning the skills and knowledge that trained instructional designers should have.

This paper will describe the experiences of the authors over the past fifteen years as they have participated in the design, development, and implementation of the graduate program in Instructional Design and Development (IDD) at Florida State University. We will use "IDD" to refer to this graduate program.

If at times, it appears to the reader that the authors seem unduly proud of the program, it is because of the successes which have been exhibited by our graduates. However, a deliberate attempt has been made to limit comments which might appear to be self-serving.

The IDD program at Florida State University is recognized for the somewhat unique backgrounds and experiences of the faculty members in the program, as well as the success of its graduates. The program is a reflection of the skills, knowledge, and points-of-view of these faculty members. Therefore, the first section of the paper traces the historical and conceptual roots of the program. It indicates the primary factors which influenced the status of the program today. The second section describes the current master's and doctoral programs in terms of their academic content, procedures and faculty roles. In a brief final section, those features which distinguish the program from others are identified, and a brief look at possible future change in this program is provided.

HISTORICAL ORIGINS OF IDD PROGRAM

No academic program is created instantly; rather it evolves through time and is the product of its origins and other contemporary influences. In order to understand the current IDD program at Florida State University it will be useful to review its beginnings and the conditions which contributed to its growth. In the period immediately following World War II, the Florida State Legislature man-

*The term "instructional designer" is used in this chapter as a synonym for the terms "instructional developer" and "instructional systems designer."

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dated the shift in both name and function of Florida State College for Women - a small girl's college - to Florida State University. In less than two decades the enrollment grew from around 2,500 students to more than 20,000. Many new colleges and departments were founded during this period, one of which was the Department of Educational Research and Testing. This department was responsible for teaching graduate courses in research methodology, statistics and measurements and, in 1955, was authorized to offer the master's and doctoral degrees in the specialty area of educational research. It had a fairly classical research orientation and was generally recognized as a small but quality program.

In the early sixties, educational research and development throughout the country was subjected to considerable turbulence due to a number of events - Sputnik, the National Defense Education Act, the War on Poverty, and sharply increased criticism of public education. Federal funding for educational research was enormously accelerated during this period. An additional energizing influence at this time was doubtless Skinner's concept of programmed learning. Educational technology began to emerge as a research interest for many professionals who had not previously shown much concern for the problems of education.

It was within this climate of ferment that FSU's Department of Educational Research began to expand its capabilities. In perhaps its first departure from traditional patterns of research activity, the department hired Duncan Hansen from Stanford University, a student of Patrick Suppes, and Walter Dick from HRB-Singer Corporation in 1966. These two brought the department a strong interest in computer-assisted instruction and programmed learning and soon established at this time the CAI laboratory on the campus. The university also established at this time the Division of Instructional Research and Service (DIRS), to which several of the department's faculty members were assigned part-time. DIRS was chartered to channel research knowledge and technology into the improvement of the university's instructional programs. The CAI laboratory and DIRS created environments in which sophisticated, interdisciplinary developmental research could be carried on by the department's faculty and graduate students. As large research projects were undertaken, the need for a wider variety of research and teaching specialties became increasingly apparent.

In 1968, the department added three additional senior faculty members in the area of educational technology and instructional systems. These were R. M. Morgan from the USOE's Bureau of Research, Leslie Briggs from the American Institutes of Research, and Thorwarld Esbensen, Assistant Superintendent of Instruction of the Duluth School System. Morgan was named head of the department at that time. Others who are graduates of programs at Arizona State University (Bob Reiser), Indiana University (Walter Wagner), and the University of Massachusetts (Marcy Perkins) were also employed during the next decade and continue to serve on the faculty. As staff were added, the variety of graduate course offerings expanded, reflecting the interests of the new faculty members and the programmatic needs of the IDD program. In addition to the younger faculty members, R. M. Gagne, Robert Branson, Roger Kaufman and Ernest Burkman joined the IDD faculty as full professors, and this provided a comprehensive and balanced range of specialties.

From 1968 through 1973, the Educational Research Department's faculty grew from eleven to thirty-five, about half of whom were in the IDD program area, and the resident graduate students increased from fifty to over two hundred. External contract and grant funding during this five-year period showed a similar growth rate. In 1971, the department created the Center for Educational Technology to facilitate the management of its project research activities.

Florida State University was not the only university during this time to begin to build an institutional capability in instructional design. The late Jim Finn of the University of Southern California, Ole Larsen of Indiana University, and Charles Schuller at Michigan State University were also expanding their programs in this direction. A difference between these efforts and those of Florida State University's was the academic foundation upon which the "systems" programs were being developed. Many of these new programs were incorporated into academic programs which were historically media or audiovisual in orientation, while at Florida State University the academic base was a research department. These differing origins have doubtless contributed to the variance in the emphases and in the strengths of these several programs. It is interesting to note that, perhaps, the earliest call for what had become IDD was made by Charles F. Hoban in his 1956 Lake Okoboji keynote address entitled "A Systems Approach to Audio-Visual Communication."

FIRST PROGRAM EVALUATION AND REVISION

By the mid-seventies the IDD program at Florida State University was fairly well established. It had simply grown with people and courses being added as needs became evident and resources became available. Generally, this growth occurred in a rational, non-empirical way. There was little or no systematic needs-assessment or front-end analysis--techniques devoutly espoused, even though at times casually practiced by the faculty. Generally, Florida State University's progam and the systems discipline it promoted represented a convergence of three older and well-established disciplines: behavioral science, communications, and management science. The faculty accepted the success of its

master's and doctoral students as at least partial validation of the academic program it had conceived. The graduates were readily employable in prestigious institutions and into positions of responsibility.

There was a reorganization of the College of Education in 1973 which had neither beneficial nor adverse long-range effects upon the IDD program. It is mentioned here because it caused the faculty to undertake an extensive reexamination of the master's and doctoral programs. With a fairly large number of graduates by then working in the field, it was possible, by surveying and interviewing them, to determine the congruence between the degree training requirements and the competencies that the graduates actually needed on the job. This study represented a first mid-course revision of the graduate training program based upon empirical data.

The first step in the analysis was to determine the kinds of professional positions the graduates were occupying. The data, when gathered, was somewhat surprising and enlightening to the faculty. There was a much greater diversity of employment than had been expected, and graduates were found working in industrial and military training, international organizations, foreign governments, and research organizations and foundations. Of course, many graduates were working in universities and in public education. From this information the faculty identified and described nine career fields which seemed to offer opportunities for the IDD graduate. These fields are listed and described below:

1. **R & D Organization.** Design, development, evaluation, and research instructional materials and delivery systems. Projects are likely to require originality in many aspects of design. Organizations typically seek funding of projects or proposals which may be unsolicited or in response to published requests (RFP's). Positions may be located in regional laboratories, independent R & D firms, specialized sections of industrial concerns, university or school systems research centers.

2. **Instructional Development Bureau.** Cooperative development and evaluation and course models. Provide consulting services to faculty members in a variety of subject-matter fields, and design new courses and programs, including those utilizing media in new ways. Typical settings for such positions are in universities, four-year colleges, junior colleges, community colleges.

3. **Teacher Education.** Designing, developing, and evaluating educational systems for teacher (and other personnel) education; revising existing programs or program segments; identifying and developing materials; specifying competency for educational personnel and designing performance assessment procedures; developing management systems for teacher education programs. The setting for this type of position is the college of education, state-operated teacher centers, or the teacher education center of a large school system.

4. **Medical and Professional School Education Design.** Design, development, and evaluation of new courses and programs, using a variety of media. Consultation with professors on design and evaluation techniques. Development frequently involves use of the computer. Initiating and managing projects for new instructional design is often expected. R & D activities are conducted in medical schools, allied health professional schools, or other professional schools. Usually such schools place strong emphasis on the tutorial approach to the instruction.

5. **R & D Management.** Planning and managing programs of in-house research, development, and evaluation; and similar programs undertaken by contracts. Such positions usually require a broad knowledge of the field and/or workers in the field. Formulation of broadly stated plans is an important element, as is systematic and fair decision-making involving panels of experts, referees, etc. Budgeting and financial management of a program designed to meet organizational goals is essential. The work is done in offices of education, both state and federal. Employment possibilities also exist in private foundations.

6. **Military/Industrial Training Development.** Design, development, and evaluation of training courses in programs for military personnel (enlisted and officer), or for various categories of industrial employees. Design and evaluation of programs for the education of training managers and instructors; development of handbooks and other materials for such education. The development often involves human-factors knowledge related to man-machine tasks and to the use of simulator and training devices. Location may be in the field station of a military training command, or in a headquarters. In industrial organizations, the work may be conducted in a branch or in company headquarters.

7. **Learning Industry.** Planning, designing, and developing instructional materials in the form of textbooks, teaching manuals, student kits, instructional modules, workbooks, PI materials, films, slides, readiness and achievement tests, and related projects. Coordinates efforts of authors, designers, and producers. Formative evaluation often involved. Work is done for commercial organizations (publishers and related firms), usually with sales of products for profit as a goal.

8. **Curriculum Design and Development.** Development of new programs of study ("curricula") in specific areas, such as elementary science, high school English, etc. Such development efforts typically have expected funding commitments of five or more years; funding may be from national, state, or local agencies. The entire range of design, development, diffusion, and evaluation efforts are typically involved. System planning is of critical importance including marketing and utilization of products. Activities may be carried out in universities, independent agencies, or in large school systems. In the latter location, initial emphasis on evaluation sometimes leads to

subsequent new development, and the continuation of a cycle of innovation.

9. **Instructional Research Departments (in Universities).** Teaching courses, seminars, and workshops in various areas of instructional systems design and development, including the development of instructional materials and all other components required. Directs and manages research and development projects; conducts research on development process. This work of the university professor covers the entire range of systems design and development, and requires research expertise in selected areas. The setting is typically a university department of educational research, educational psychology, or instructional design.

An examination of these career fields reveals a sizeable overlap in specific job functions but also some considerable variation in other functions. When the job functions were translated into specific competencies, two things became apparent. First, not all jobs required all competencies, though there were a sizeable number of competencies which seemed to be essential to all, or nearly all, of the career fields. These common competencies defined the core training requirements for the program. Second, for many of the competencies differing levels of proficiency were required, depending upon the particular career field. The levels of competence ranged from having a conceptual knowledge or awareness, at the minimum level, to having genuine functional expertise in the competency, at the maximum level.

At this stage in the study, the competencies were classified into 16 general categories which included such specialty areas as data handling and statistics, needs analysis, goal definition, describing instructional objectives, instructional materials development, and student assessment procedures. The development of this extensive inventory of job competencies permitted the faculty to examine the course offerings and other training modalities to determine if and where the competencies should be acquired by the student and to what level of proficiency. This exercise revealed a number of things about the program, not the least of which were skills which were not being taught anywhere or were not taught to a sufficiently high level of proficiency. Conversely, we discovered several competencies which were being taught and retaught in numerous courses, resulting in needless and wasteful overlap in course content. As a consequence it was possible to rework the graduate curricula, both adding and deleting courses, and revising content within courses. This was a fairly tedious and sometimes tension-inducing process, as a balance had to be maintained between the theoretical and academic expectations of a program leading to the doctoral degree and the real-world, practical requirements of preparing people for professional jobs.

During the period from 1966 through 1974, the university clearly regarded the development of this new program as a priority. New positions, budgets, and other resources were more than adequate to nurture the growth of the IDD program. However, there was a fairly large turnover of younger faculty during these years. As Florida State University's program became more visible nationally, many young faculty members were recruited away by other institutions and agencies. The senior faculty, however, has been stable, with only one full professor leaving the department since 1966 (Esbensen returned to Minnesota to become dean of a college of education). In 1974, the Division of Instructional Research and Service and the Center for Educational Technology were merged to form the Learning Systems Institute (LSI), a university-wide educational R & D organization. LSI serves both the faculty and students as virtually an adjunct laboratory to the IDD academic program, and its existence contributes significantly to the strengths of the graduate training activities.

CONTINUING PROGRAM DEVELOPMENT

Five years after the 1973 curriculum planning effort, the faculty undertook another analysis of the placement and activities of the IDD graduates. In a survey, the former students in the program were asked how important various competencies were in their work and how important they would be in the future. In addition, ten representative doctoral graduates were invited to campus for a two-day seminar which focussed upon their assessment of the graduate program, the competencies required in their career fields, and their assessments of the requirements for instructional designers in their fields in the future.

With the data from the graduates on their perceptions of the effectiveness of the IDD program, the faculty began their review and revision of the curriculum. This process began, as it did in 1973, with a reconsideration of the career fields which the graduates were entering. While it was found that there were slight changes in employment patterns in 1980, there were relatively few changes from the list of potential employers identified in 1973. It was basically found that some graduates were working as university faculty members, while others were working as members of instructional improvement agencies within a university or as research associates on funded university projects. A few were working in the curriculum divisions of school systems or in government education agencies such as departments of education. A large number were working for the military, industrial training companies or private consulting firms. A few were working in research and development centers or in product development centers.

The data from the alumni indicated that, somewhat to the surprise of the faculty, over 40% of the graduates at the Ph.D. level were employed, with or without academic rank, by colleges and universities. The next largest employer was industry. The rest of the graduates were scattered

among military, private consulting, state and federal government, public schools, medical schools, and foreign governments.

Based upon the data from the survey, it appears that the major functions that the graduates are carrying out are: teaching, research, materials development, staff development, and managing projects. It is also noted that graduates serve both as team members and as managers of the various materials development projects upon which they are working.

Based upon this information, seven major areas of emphasis were identified for the revised graduate program in IDD. These emphases are:

1. Design and implementation of instructional systems
2. Development of instructional materials
3. Analysis of media
4. Management of instructional projects
5. Psychological factors in instruction
6. Models of instructional design
7. Trends and issues in instructional design

These areas represent a slight shift from the areas of emphasis in the prior (1973) curriculum. In particular, there is a renewed emphasis upon the overall design of instructional systems as well as upon the more specific skills required to design, develop, and evaluate instructional materials. There is an enhanced emphasis upon management skills, which graduates indicate are required in almost all employment situations. A third area of enhanced interest is that of the psychological foundations upon which the area of instructional design is based. This includes a knowledge of a variety of approaches to the instructional design process which should be available to the instructional designer. These skills are tied to a knowledge of the historical background and current issues in the field of instructional design.

An area of interest not included above is that of research skills. However, it is expected that all graduates will develop skills necessary to conduct an innovative dissertation study and to be a knowledgeable consumer and producer in the area of research in instructional design. The basic courses in research, statistics and measurement are not offered by the instructional design faculty, and will only be briefly noted in the section that follows. In the following section each of the areas of emphasis is examined in some detail to indicate the kinds of competencies which are developed by students in the graduate program.

MAJOR COMPETENCY AREAS

The seven major competency areas within the IDD program are reviewed in this section. These areas form the core program in the doctoral program as implemented in the Fall of 1981. For each area there is a description of the goals and objectives for the basic core courses as well as, when appropriate, a description of some of the optional advanced courses which are also offered in that area. While these are basically courses for the doctoral program, master's students will be taking some of them. (The master's program is described in some detail in a later section.)

"Design of Instructional Systems." This core course focuses upon the procedure employed in the development of total instructional systems, including needs assessment, goals definition, constraint analysis, project design, evaluation and implementation. The overall course goal is for students to be able to describe the principal steps in the design of an instructional system, to be able to indicate how each step may be accomplished, to describe the principal theoretical and research bases for these steps, and to describe how to solve a specified instructional problem in a specified organizational setting. Students develop an integrated, coherent plan for designing, conducting, and managing a systems design effort.

The advanced courses in this area include "Needs Assessment of Instructional Planning." This course investigates the planning and execution of various models of needs assessment and the examination of the research literature in this area. Also included is "Case Studies in Instructional Systems." This course emphasizes a study of different instructional delivery systems: their development, implementation, and evaluation. The course, "Instructional Systems in Practice," will consist of an analysis of various settings in which instructional systems have been implemented and includes strategies for dealing with constraints and barriers to the implementation of instructional systems.

"Instructional Materials Development and Evaluation." This core course emphasizes the procedures for the design and development of instruction which is deemed to be a solution to a student-selected instructional problem. The course includes the design of an instructional product, development of it in a print format, and its formative evaluation and revision. The general objectives for students are to be able to:

1. write a set of instructional objectives for an instructional goal,
2. conduct instructional task analysis for a set of objectives,
3. develop assessment instruments for a set of objectives,
4. develop an instructional strategy, including the selection of media for a set of objectives,
5. write the script for an instructional sequence,
6. conduct formative evaluation and revision of the instructional sequence.

Additional courses in this area includes "Analysis Techniques for Instruction," which teaches the methods of analysis for the derivation of instructional requirements through examples of job, task, and content analysis. Also offered is a course on "Advanced Topics in Instructional Evaluation" which will draw upon current research literature on the formative and summative evaluation of instructional systems. A "Special Seminar

on Advanced Topics in Instructional Systems" is offered on an as-needed basis to deal with topics which are timely.

"Analysis of Instructional Media." This core course provides an introduction to the processes and products of educational media development through the study of hardware components, evaluation criteria, and production requirements. The development of production competencies is not the goal of this course. These competencies are developed in advanced courses. Rather, the general goal is for students to develop a general knowledge of the processes and products of educational media development, including the specific ability to:

1. Specify the hardware components and procedures of production applicable to graphics, audiovisual, and computer production:
2. Evaluate media by critiquing products through the application of criteria in such areas as printed text, projected graphics, audiotape, video, etc.:
3. Communicate requirements for the nature and quality of products for a given application, including their costs and production times.

It is anticipated that students who complete this course will choose media products and production techniques which are appropriate to the time. effort, work precision, and costs which are involved in such efforts. Advanced courses in production which will be available to students in the program include "Instructional Television," "Text and Illustrated Materials," "Graphic Design and Advanced Photography," "Computer Courseware Development," and "Multimedia Production." Individual doctoral students typically take one or two of these advance courses. (Students with master's degrees in media may choose to take no advanced courses in this area.)

"Managing Instructional Development." This core course emphasizes management procedures used in instructional development projects, including specific aspects of project management, organizational development, policy formation, staff development, marketing, and dissemination. This new area in the core stresses student knowledge of organizational theory and its application to instructional development organizations, as well as the application of human relations skills required for successful project management in a variety of typical instructional design settings.

"Theories and Models of Instructional Design." Two core courses will be offered in this area. The first emphasizes the application of the ideas of prominent contemporary theorists such as Gagne, Skinner, Ausubel, and Bruner to instructional design. Theories of learning, cognition and information processing are emphasized.

In a second course, models of instructional design and delivery are studied with a focus upon the empirical and conceptual basis of a variety of current models of instruction. In addition, the interservice Instructional Systems Development (ISD) model, models used by various companies, as well as non-systematic approaches to instruction, are also considered.

"Trends and Issues in Instructional Design." This broad heading is intended to provide an overview of the field of instructional design, including historical background, research foundations, current issues and future trends in the field. The professional aspects of being an instructional designer will also be emphasized in terms of ethics and the role of the designer in professional organizations.

The areas listed above provide the foundation for the IDD doctoral program. One additional competency area reaquired of all students is that of research. All students are required to take descriptive and inferential statistics courses as well as one or more courses in the area of research design. In addition, a number of research courses are offered within the instructional design program itself. These courses emphasize the procedures and techniques employed in conducting instructional research as well as the in-depth analysis of instructional problems prior to the formulation of a research problem.

An advanced course is also offered in which non-experimental techniques for researching instructional problems are explored. This includes evaluation and policy analysis techniques, as well as case study and other approaches which are appropriate for advancing knowledge in the field of instructional design.

PROGRAM PROCEDURES

The basic procedures required for the completion of the master's and doctoral degrees in IDD are described in this section. Also included is a brief description of the typical roles of faculty members in the academic program. However, before describing the procedures and roles, it is important to note the distinction between the master's and the doctoral programs in IDD.

In the revised curriculum which is being implemented in the eighties, the faculty have attempted to blend the skills required for research and scholarship in the field of instructional design with the skills required of the practitioner to implement and manage ongoing instructional development activities. These two thrusts co-exist within the program, and doctoral students are provided the opportunity to specialize in either of the two basic approaches to the field. The faculty is convinced that the doctoral program must go beyond instructional design skills and include specialty orientations which are based upon advanced courses in the major competency areas which have been described in the preceding section. In essence, instructional design skills are absolutely necessary, but not sufficient, to define a Ph.D. program in IDD. Students are reqûired to take core and specialty courses along with the dissertation, requiring from two to three years of

academic work to complete their doctoral program.

The skills which were often seen as the exclusive domain of the doctoral program in the area of instructional design, are not the major components of the master's program. The faculty now views the function of the master's degree program as that of training the practitioner who will become deeply involved as a productive member of an instructional development team. It is important that a person have the basic instructional design skills and some initial experience before joining an ongoing instructional development project. The master's requires 32 semester hours or about one academic year of credit. No thesis is required for the completion of that degree.

Doctoral Program Procedures. The statewide requirements for admission to graduate study in Florida public institutions is either a grade-point average of 3.0 or better on the last two years of undergraduate study or a Graduate Record Examination total score of 1,000 or greater on the quantitative and verbal sections of that test. On some occasions, it is possible to use the fact that a person has received a master's degree from a recognized institution of higher learning as qualifying that person for admission to a doctoral program. These are, however, minimal admissions standards, and the overall quality of the applicant's academic record, as well as recommendations, are given considerable weight in determining admission to the program.

Upon admission to the IDD doctoral program at Florida State University, each student is assigned a temporary advisor who will work with her/him for an initial period of study in selecting appropriate courses. A faculty qualifying review is held during the students' first year of doctoral study to consider the progress of the student and to determine whether, based upon the evidence to date, s/he is qualified for continuation in the doctoral program. (Note that no written examination is required of the student at this point in the program.)

Following the qualifying review by the faculty, the students who are qualified are then eligible to select major professors and doctoral committees, and to begin the development of complete "programs of study." The "program of study" is a written document which indicates the academic activities in which a student will participate in order to complete the doctoral program. This listing includes core courses, specialty courses and internships which are required in the program.

Each doctoral student is required to take three internships, each of which is roughly equivalent to a two semester-hour course. Internships are typically one semester in length and take place in a research-and-development organization on the Florida State University campus or in the Tallahassee area. The intent is to provide the student with experience in working with a number of organizations, and in understanding the nature of the problems and procedures in these organizations. Several students have in recent years engaged in off-campus, long-term (six month) internships with industrial organizations. It would appear that there is continuing interest in this type of internship activity, which typically includes a salary for the participating student.

Many doctoral students are supported through assistantships which are available both from state funds and from grant and contract funds. Assistantships typically require fifteen to twenty hours of work per week from the student who is also taking twelve to fifteen hours of courses. Nearly all students are full-time participants in the doctoral program since the residency rule requires that all doctoral students complete at least two semesters of full-time campus study.

Following substantial completion of the activities described on the "program of study," the student takes the preliminary examination which is the culmination of her/his coursework activity. The examination is developed by the student's individual committee members and typically includes four questions, each of which requires approximately eight hours of "open book" writing by the student. Some sections of the examination can also be "closed-book." This examination is followed by an oral examination of the candidate.

Successful completion of the preliminary examination qualifies the student to begin work on the doctoral dissertation. The type of dissertation study which will be accepted by the faculty in instructional design has slowly changed over the past ten years. Initially, it was almost always mandatory for a student to complete an experimental, data-based study. While the faculty still requires a data-based study, there is now more of an acceptance of dissertations which include greater developmental and evaluation emphases, as opposed to a purely experimental focus. Completion of the dissertation and of an oral defense results in the awarding of the Ph.D. in IDD. (No Ed.D. is offered by the program or the department.)

Procedures for Master's Program. The admission criteria for the master's program are identical to those for the doctoral program. Once admitted, a student is immediately assigned an advisor who will serve as a major professor unless there is a significant reason to change. Because the master's program is typically completed in one year, the timely selection of courses is often critical. The master's program in IDD has, in the past, had no required courses but, rather, it was left to the student and the faculty member to determine those courses which would be most applicable to the student's career goals. The student was required to take one internship and often held an assistantship. With the new semester system curriculum, the master's program is more structured to insure that all students get the basic courses in instructional design, and that they develop the full array of skills which will be

valuable for their participation in instructional design projects.

During the final quarter of enrollment, the master's student takes a comprehensive examination which is prepared by her/his committee. Typically this is an open-book exam which includes three questions, each of which requires approximately four hours to answer. The written examination is then followed by an oral examination, the successful completion of which results in the awarding of the M.S. degree. Approximately twenty-five percent of the master's graduates continue into the doctoral program.

The descriptions of the doctoral and master's programs in IDD at Florida State University are not totally unlike other instructional design programs. What tends to distinguish these programs from others is: (1) the focus of the courses upon instructional design skills, (2) the variety of advanced courses which are offered each semester, (3) the practical experiences which are available to students in the form of assistantships, and (4) a variety of centers and projects which are available for internships.

Faculty Roles. While there is no such thing as a "typical" faculty member, we will attempt to describe some of the functions carried out by the faculty in the program. The most obvious responsibility for all the faculty is to teach in the doctoral and master's programs. Almost no faculty members teach at the undergraduate level, although occasionally a faculty member will assist with educational psychology or media courses for undergraduates.

With the semester system, full-time faculty members typically teach both core courses and specialty courses. Since the core courses are team taught, faculty loads from semester to semester typically include one core course and one specialty course.

Each faculty member also serves as a temporary advisor for several new doctoral students as well as major professor for three to eight doctoral candidates. A faculty member might also serve on fifteen to thirty other graduate committees including major professorship or committee member for master's students.

The typical faculty member also serves on a number of committees in the university. Some of the most important of these are those at the program level in which substantive plans are made for new courses and regulations. The department (as contrasted with the program) has important governance and admissions committees upon which program faculty members must serve. The college and university committees offer other opportunities for the faculty member to interact with colleagues and to provide service at those levels. In addition, some faculty members are officers in state and national organizations, which require them to expend much time and effort.

Each faculty member is also typically engaged in productive research and development activities. These activities often take the form of externally-funded projects. The funded projects provide the critical resources for the faculty member to demonstrate creative contributions to the field of instructional design and to provide employment for graduate students in the master's and doctoral program.

The faculty role description usually indicates the participation of the faculty member in one or more consulting activities with external organizations. Faculty members have worked with schools and state departments of education as well as industry, military and international organizations.

These activities of the faculty, namely teaching, advising, researching and consulting, interact with each other so as to provide them with a broad, comprehensive overview of the instructional design field and the ability to teach specific skills which can be applied in the field.

MAJOR PROGRAM FEATURES

Preceding sections of this chapter have described the historical background and the current nature of the IDD program at Florida State University. In this section, we would like to point out those features of the overall program which we believe distinguish it from the various instructional design programs which exist today in other academic institutions. These observations will be summarized in terms of the faculty, the academic program, and the academic organization. We will conclude with comments concerning the future of the program itself.

The Faculty. Ten faculty members have their major academic appointment in the IDD program. It should be noted, however, that in addition, there are three (3) faculty members in the area of media education and approximately eleven (11) others in the area of research design, measurement and evaluation who are in the same department as the IDD program and offer courses that are integral to the IDD program. The importance of the number of faculty members who are available becomes apparent when curriculum planning is undertaken. The number of available faculty members form a critical mass of teachers who can offer a variety of courses in the instructional design area. This in-depth approach to the curriculum prevents the offering of superficial courses which can only touch the surface of a great variety of topics, and offers the students the perspectives of a wide number of faculty members.

The faculty members presently participating in the program have a variety of academic backgrounds, all of which tend to focus on a behavioral approach to learning and instruction. The majority of the faculty members have received their doctoral degrees in either psychology or educational psychology, while others have received training in science education and communications. The younger faculty members have been trained in educational or instructional technology departments. The faculty members have been trained at such institutions as Ohio State University,

Pennsylvania State University, University of Michigan, Indiana University, University of Massachusetts, Brown University, New York University, and Arizona State University.

The faculty members who have participated in the program have been carefully selected because of their range of professional interests. These interests include topics which are both theoretical and applied. Products of these interests have ranged from Gagne's Conditions of Learning to Burkman's ISCS and ISIS Science Curricula for junior and senior high school students. Research interests range from cognitive psychology to the conduct of needs assessments with vocational education teachers. These interests are expressed with a variety of clients with whom the faculty work. These clients include the other faculty members on the Florida State University campus, the Florida Department of Education, the National Science Foundation, the National Institute of Education, the Agency for International Development, and the Organization of American States. In addition, a number of projects have been conducted with a variety of military organizations, and the faculty members often consult with various industrial or commercial organizations.

The Curriculum. The major focus in the academic program is on the instructional design process. Above all else, master's and doctoral students are trained to design, develop and evaluate instructional systems. Students receive a behavioral orientation both in terms of a theoretical background and applied skills for the development of such instruction.

A secondary level of emphasis within the program is the development of management skills and familiarity with the variety of hardware devices which is available to mediate instruction. However, neither of these two areas serves as the major emphasis in individual student programs. In addition, it should be noted that there is no specific content interest, such as public school topics or vocational education topics, within the program. Nor is there an emphasis upon the training of a particular type of learner, such as a public school child or a military employee. It is assumed that the students in the program are prepared to work with a variety of content areas and learners.

Another important characteristic of the academic program is the variety of backgrounds which the students bring to the program. There have been carefully screened groups from Latin America which have been sponsored by the Organization of American States, as well as individuals who have been sponsored by the Agency for International Development. In addition, the United States Army and Coast Guard have sent students on special assignment to the program, as have the Australian Army and Navy. Many public school teachers and community college teachers have come to the program to upgrade their skills or to develop entirely new career fields for themselves. Recent graduates in psychology and sociology as well as graduates in education find the instructional design program to be an era of great applied interest to them. While there have been relatively few students who have entered the program from industry, graduates often seek jobs in industry.

Organization. Two aspects of the academic organization are important features of the program. The first is that the IDD program is part of a larger academic department in the College of Education. The department in which the program is housed, as noted in the first section of this paper, is the Department of Educational Research, Development and Foundations. The department standards and expectations are established by a faculty of thirty-five members which includes those who teach research design, statistics, measurement, evaluation, international development, sociology of education, educational psychology, and media, as well as instructional design. This intellectual atmosphere is conducive to maintaining high standards of performance and productivity by the faculty.

Another important characteristic of the program is that it is not required to provide ID or media services to the university. While media services and instructional design are available on the Florida State University campus, some of which is provided by the IDD faculty, the responsibility for that service is not that of the College of Education nor of the IDD program. Therefore, the faculty is free to focus upon the teaching, the research and the development functions of the academic program, and various selected service activities.

THE FUTURE

There is a constructive tension in the program between theoretical concerns and the solving of problems of the real world. This tension causes the faculty to continually examine the balance in the program between the two ends of the continuum. This balance is a concern as the faculty plans the program and looks at the career fields that graduates will enter. It is a concern as the faculty plans research and development activities and considers the various service opportunities which are available to them. Each faculty member decides, based upon his/her abilities and opportunities, how to maintain this balance in her/his own work and consequently, the overall balance within the program.

As we enter the eighties, the faculty looks forward to a continually changing and improved curriculum, the attraction of highly qualified and motivated students, the continuing development of young faculty members, and the continuing opportunity to work on the cutting edge of the field of instructional design - a field which many of the faculty have themselves helped to originate and nurture.